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December 21, 1981
 NRC/TMI-81-073

MEMORANDUM FOR: Harold R. Denton, Director
 Office of Nuclear Reactor Regulation
 Bernard J. Snyder, Program Director
 TMI Program Office

FROM: Lake H. Barrett, Deputy Program Director
 TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT



Enclosed is the status report for the period of December 13, 1981 to December 19, 1981. Major items included in this report are:

- Liquid Effluent Releases
- NRC and EPA Environmental Data
- Radioactive Material and Radwaste Shipments
- TMI Occupational Exposure
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries
- Spurious Siren Activation
- Public Meetings

Original signed by
 Lake H. Barrett

Lake H. Barrett
 Deputy Program Director
 TMI Program Office

Attachment: As stated

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cc w/encl:

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

December 13 - December 19, 1981

Plant Status

Core Cooling Mode: Heat transfer from the reactor coolant system (RCS) loops to reactor building ambient.

Available Core Cooling Modes: Decay heat removal systems. Long term cooling "B" (once through steam generator-B).

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Modes: Mini decay heat removal (MDHR) system.
Decay heat removal (DHR) system.

Major Parameters (as of 0500, December 18, 1981) (approximate values)

Average Incore Thermocouples: 109°F

Maximum Incore Thermocouple: 133°F

RCS Loop Temperatures: (The last cycle of natural circulation occurred in the "B" loop on 12/13/81 and in the "A" loop on 12/11/81)

	A	B
Hot Leg	95°F	100°F
Cold Leg (1)	70°F	88°F
(2)	88°F	90°F

RCS Pressure: 95 psig

Reactor Building: Temperature: 63°F
Water level: Elevation 287.2 ft. (4.7 ft. from floor)
via penetration 401 manometer
Pressure: -0.2 psig
Concentration: 5.3×10^{-6} uCi/cc Kr-85
(Sample taken 12/9/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from the TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

During the period December 11, 1981, through December 17, 1981, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources which originated within Unit 2 contained no detectable radioactivity.

2. Environmental Protection Agency (EPA) Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

- EPA Kr-85 sample results were not available due to delays in reporting analytical results. Area Kr-85 concentrations will be reported in a future report.
- No radiation above normally occurring background levels was detected in any of the samples collected from the EPA's air and gamma rate networks during the period from December 9, 1981, through December 17, 1981.

3. NRC Environmental Data. Results from NRC monitoring of the environment around the TMI site were as follows:

- The following are the NRC air sample analytical results for the onsite continuous air sampler:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-295*	November 18, 1981 - November 24, 1981	<9.2 E-14	<9.2 E-14
HP-296	November 24, 1981 - December 2, 1981	<5.9 E-14	<5.9 E-14
HP-297	December 2, 1981 - December 10, 1981	<6.1 E-14	<6.1 E-14
HP-298	December 10, 1981 - December 17, 1981	<7.3 E-14	<7.3 E-14

*Error in last report. Sample number was reported as HP-294.

4. Licensee Radioactive Material and Radwaste Shipments.

- On Tuesday, December 15, 1981, one EPICOR II dewatered resin liner (liner F-3) was shipped to U.S. Ecology, Richland, Washington.
- On Tuesday, December 15, 1981, one EPICOR II dewatered resin liner (liner F-17) was shipped to U.S. Ecology, Richland, Washington.
- On Thursday, December 17, 1981, 35 drums containing Unit 1 and Unit 2 contaminated laundry were shipped to Tri-State Industrial Laundry Inc., Utica, New York.
- On Friday, December 18, 1981, ten 60 ml SDS (Submerged Demineralizer System) samples from Unit II were shipped to Oak Ridge National Laboratory, Oak Ridge, Tennessee.

5. TMI Occupational Exposure. Licensee TLD (Thermoluminescent Dosimeter) records indicate the following Unit 2 total occupational radiation exposure for 1981.

November 1981	16 man-rem**
Total 1981 (January-November)	126 man-rem

** Man-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if two people were to receive a dose of 0.5 rem (500 millirem) each, the total man-rem dose in each case would be one man-rem.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch number 13 was completed on December 18, 1981. Batch 13 contained miscellaneous contaminated water which was staged in the reactor coolant bleed tank for processing. Reactor building sump water processing will recommence after filter media change out and some minor repairs to the SDS. To date, 290,000 gallons of reactor building sump water have been processed. SDS performance parameters for batch number 13 are attached.
2. EPICOR II. EPICOR II processing of SDS effluent continued this week. The latest performance parameters for EPICOR II are attached.
3. Reactor Building Entries. Reactor building entries 25 and 26 were completed on December 15 and 17, 1981. During these entries an extensive characterization of surface contamination was completed in preparation for the decontamination experiment. Surface contamination samples were taken from 48 locations in the reactor building. The sampling technique included a vacuuming device for collecting loose surface contamination and a boring machine in conjunction with the vacuum for collecting fixed contamination. Reactor building air samples were taken; a survey was made of certain areas where there was evidence of high temperatures during the accident.

Reactor building entries will continue after the holidays. Decontamination experiment water washes inside the reactor building are scheduled to commence in mid January 1982.

4. Spurious Siren Activation. On December 17, 1981, between 5:00 and 6:00 PM several early warning sirens in the vicinity of TMI sounded inadvertently. The licensee reported that the siren activation was caused by a decoding device malfunction. The sirens were installed by the licensee as a part of the area emergency preparedness network. Control of the sirens is scheduled to be turned over to the local counties by next week.

Future Meetings

1. On Friday, February 26, 1982, Lake Barrett will be speaking for the dinner meeting being held by the Engineers Week Joint Planning Council to honor Lehigh Valley's Engineer of the Year and Young Engineer of the Year.
2. On Saturday, March 13, 1982, Lake Barrett will address the Society of Manufacturing Engineers in Williamsport, PA, on the cleanup of TMI and general aspects of nuclear power.
3. The NRC's Advisory Panel for the Decontamination of TMI Unit 2 is scheduled to meet on January 13 and January 28, 1982, at the Holiday Inn, 2nd and Chestnut Street, Harrisburg, PA from 7:00 to 10:00 PM.

ATTACHMENT

SDS Performance for Batch Number 13
(Reactor Coolant Bleed Tank Water)

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	5.7	4.8 E-3	1.2×10^3
Strontium 90	.59	2.0 E-2	2.9×10^1

EPICOR II Performance for Reactor Coolant Bleed Tank Water
December 9, 1981 to December 16, 1981

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	5.1×10^{-3}	2.4×10^{-7}	2.2×10^4
Strontium 90	2.5×10^{-2}	$< 1.1 \times 10^{-5}$	$> 2.3 \times 10^3$
Antimony 125	3.5×10^{-3}	3.9×10^{-7}	9.0×10^3